

“Utility Deregulation Opportunities”

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Mr. Scheer is Assistant Vice President of Energetics, Incorporated and currently manages the Technology and Market Assessment Division. In this capacity he supervises 12 staff members conducting technology assessments, market analysis, and outreach activities in the commercialization of advanced energy technologies. Mr. Scheer holds bachelors and masters degrees in economics and has 20 years of experience. He is currently working on a Clean Power Generation Road Map for the Offices of Fossil Energy and Energy Efficiency and Renewable Energy at the U.S. Department of Energy. He is also involved in performing background analysis for the Administration's Comprehensive Plan for Electricity Competition including studies of renewable portfolio standards, public benefits funds, information disclosure provisions, and public interest research and development programs in restructured electricity markets. He has assisted in the development of technology road maps for the Industries of the Future programs including the aluminum, glass, metal casting, and combustion industries. He recently began a new assignment with the Office of Industrial Technologies on combined heat and power technologies. Recently he assisted in the development of the Comprehensive National Energy Strategy. Prior to joining Energetics in 1987, Mr. Scheer was the Manager of the Utility Planning Group for Battelle, Pacific Northwest Laboratories and prior to that he was the Supervisor of Load Management Analysis for Pacific Gas and Electric Company.



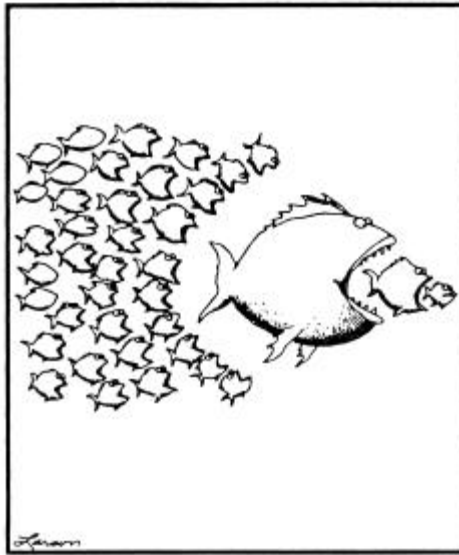
Electric Industry Restructuring- Current Status and Future Possibilities

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Overview

- ◆ Restructuring scenarios
- ◆ Federal and state activities
- ◆ Opportunities for large electricity users



**Big dogs
eat first,
but little
dogs won't
starve**



Today's Strategic Choices

- ◆ **Focus on “core” business**- divest energy, assets, sign long-term contracts, outsource
- ◆ **Energy as profit center**- self-generate, use CHP, sell electricity and steam
- ◆ **Stay-the-course**- no major changes, wait & see



105th Congress

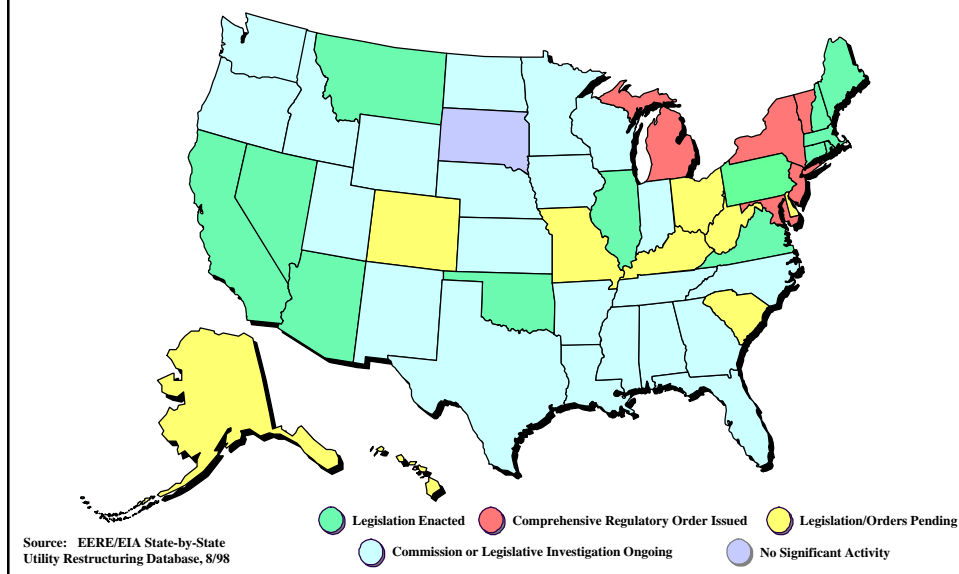
- ◆ 22 restructuring-related bills introduced (11 Senate bills, 11 House bills)
- ◆ Administration released a bill 6/98, which was subsequently introduced in the Senate
- ◆ 5 bills have mandatory retail choice dates
- ◆ 6 bills have Renewable Portfolio Standards
- ◆ 3 bills have mandatory disclosure provisions



Summary of State Restructuring Activities

- ◆ 13 states have enacted comprehensive legislation
- ◆ 5 states have issued comprehensive regulatory orders
- ◆ 9 states have legislation/orders pending
- ◆ 22 states have ongoing regulatory or legislative investigations
- ◆ 1 state has no significant activity

Overview of State Restructuring Actions



Retail Choice

- ◆ 4 states enacted retail choice laws in 1996 (CA, NH, PA, RI), 6 states in 1997 (IL, ME, MA, MT, NV, OK), & 3 states in 1998 (AZ, CT, VA)
- ◆ Of the 13 states with enacted retail choice legislation, 3 are currently offering retail choice in 1998 (CA, MA, RI); NH and PA scheduled to begin 1/1/99



Retail Choice (cont.)

- ◆ In 1998, 18 million (14%) U.S. electricity customers will have choice- this will increase to at least 24.5 million (20%) in 2000
- ◆ In California, 2 months after it opened for competition, only 1.1% of customers switched providers
 - ▶ More than 95% of the load that switched was industrial, commercial, and institutional customers
 - ▶ PG&E and SDG&E reported that 1/4 of their industrial customers asked to switch providers



Retail Choice Options

- ◆ Pricing
 - ▶ Lower costs per kWh
 - ▶ Longer contract term lengths
 - ▶ Risk management- hedges, options, swaps
- ◆ Suppliers
 - ▶ Power
 - ▶ Energy services
 - ▶ Technologies (e.g., efficiency, self-generation, CHP)



Retail Choice Options (cont.)

- ◆ Procurement Mechanisms
 - ▶ Outsourcing
 - ▶ “Energy Islands”
 - ▶ Performance Contracting



Examples

- ◆ 1995 Big 3 Automakers ink 10-year deal with Detroit Edison
 - ▶ 10% rate cut
 - ▶ On-site service representatives
- ◆ 1996 Simpson Paper Co. sells “energy island” to Tractebel Power and Wheelabrator
 - ▶ 40% of the mill site’s capitalization
 - ▶ Buying back “heat, steam, light, motion”



More Examples

- ◆ Hannaford Bros. (118 grocery stores) buying self-generation units (gas turbines)
 - ▶ Negotiating advantage on utility rates
- ◆ 1997 Coors sells 375 MW unit to Trigen for \$22 million
 - ▶ Trigen installs \$40 million in upgrades
 - ▶ Coors inks 25-year power and steam contract



More Examples

- ◆ Oakland School District hires Honeywell to provide energy services
 - ▶ “Performance contract”
 - ▶ Measures save \$500K of annual \$3.5 million energy bill
- ◆ Idaho Power inks 5-year, 120 MW deal with FMC (phosphorous manufacturer)
 - ▶ On-site energy advisor
 - ▶ Take-or-pay contract
 - ▶ FMC can sell unneeded power and split profits with utility



And More Examples

- ◆ Commonwealth Edison buys Harvard University's Energy Plant for \$147 million
 - ▶ Gets Harvard "out of the energy business"
 - ▶ \$60 million in revenues selling steam, cooling, and electricity to 6 facilities
- ◆ SC Electric & Gas- Westvaco 99 MW cogen deal
 - ▶ Replaces paper mill's existing system, 20-year contract
 - ▶ Westvaco purchases 2/3 of output, rest sold to spot market



Conclusions

- ◆ Federal electricity legislation moving slowly; will be considered again next Congress
- ◆ A few states moving rapidly, but many more taking "wait & see" approach



As a Result

- ◆ Restructuring regulations lagging far behind market forces
 - ▶ Open markets already here for large customers
 - ▶ But, “trickle down” to smaller customers happening much more slowly
- ◆ Take advantage of the opportunities now, your competitors already are!